

Water Messages in Stone



■ Grade Level:

Lower Elementary, Upper Elementary, Middle School

■ Subject Areas:

Fine Arts, Anthropology

■ Duration:

Preparation time:
30 minutes

Activity time: 50 minutes

■ **Setting:** Classroom

■ Skills:

Interpreting; Applying (designing); Presenting

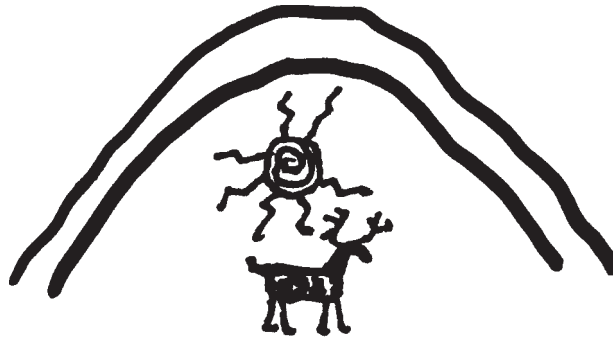
■ Charting the Course

Activities related to culture and art, such as "The Rainstick," can be completed in conjunction with this. A related activity is "Old Water," in which students explore how long water has existed on Earth. Also, concepts learned about the water cycle (e.g., "The Incredible Journey" and "Water Models") and climate ("Piece It Together") could be reinforced by this activity.

■ Vocabulary

archaeology, petroglyph,

Could you interpret this message if it were left for you?



▼ Summary

Students replicate rock paintings and carvings to learn about ancient cultures' relation to water and to create their own water-related expressions.

Objectives

Students will:

- demonstrate how ancient cultures drew messages to express their relation to water
- discern characteristics of pictographs and petroglyphs

Materials

- *Photographs of petroglyphs* (optional)
- *Drawing paper and pencils*
- *Chalk and chalkboard*

Materials needed to create painted pictograph:

- *Flat surface such as plastic, rock, or paper*
- *Watercolors or other painting media*
- *Paint brushes*

Materials needed to create petroglyph:

- *Flat surface such as soap, plastic, a soft rock, plaster of Paris*
- *Nails*
- *Protective gloves*
- *Goggles*

Making Connections

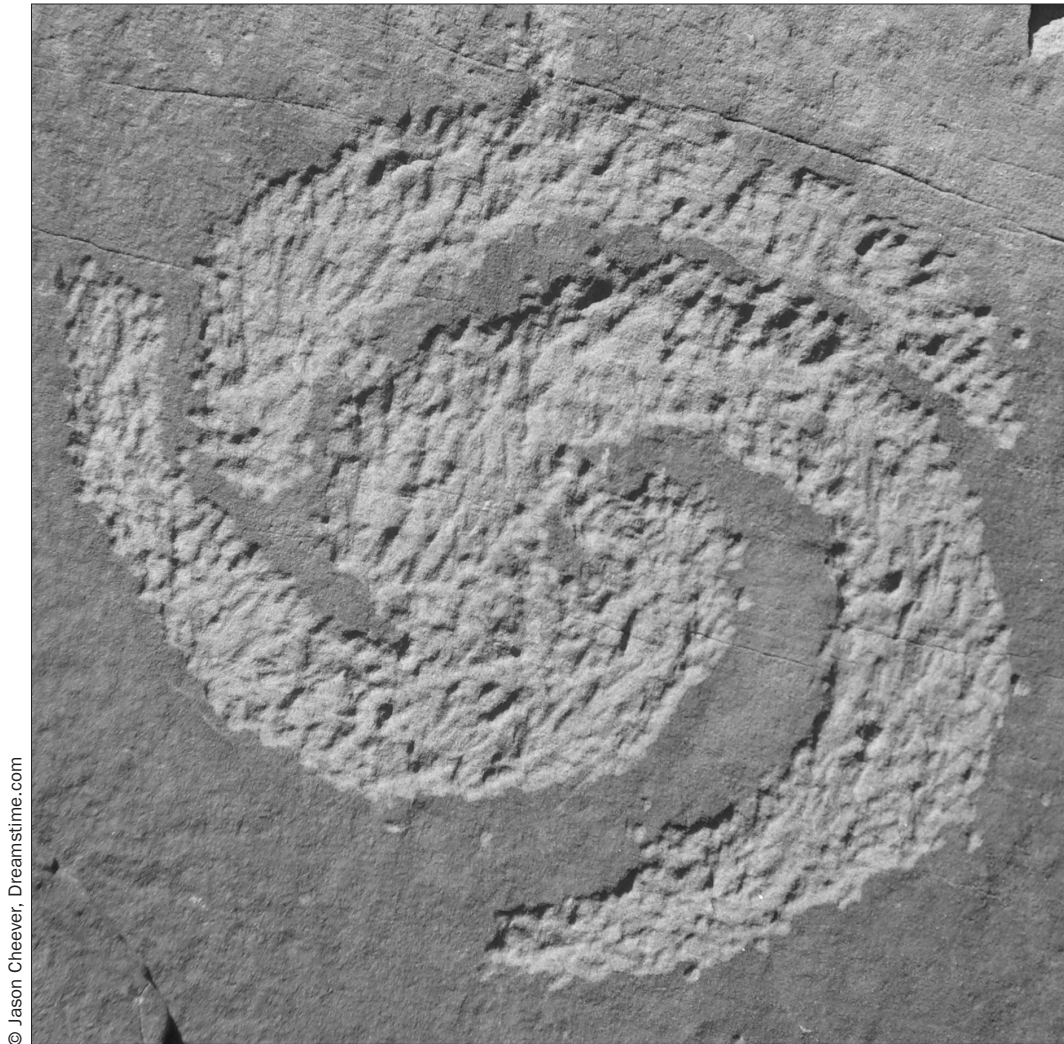
People leave messages to each other on notes and answering machines. Often messages relay information of value to the sender and receiver (e.g., appointments, requests). Learning about and interpreting prehistoric messages left in stone helps students understand the value ancient cultures placed on water and other natural resources.

Background

Throughout the world evidence exists of early peoples' attempts to communicate their ideas or to record their histories through pictures. Among the most ancient and enduring of these messages are pictures painted and carved on rocks. Many archaeological and historic sites throughout North America contain ancient and historic rock paintings and carvings.

Each painted image or incised symbol can be viewed as a work of art and a sensitive reflection of the culture that produced it. Some European and African works were crafted thousands of years ago. These creations provide insight into ancient lifestyles and ideas.

A pictograph communicates through pictures on stone that are chipped, carved, or painted. The earliest form of picto-



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Spiral petroglyph.

graph is the petroglyph, in which images are pecked or chiseled into rock surfaces with hard stone and bone tools. To create such an image, the carver wields a heavy stone to hammer a sharp rock into a stone surface. This was an exacting process, requiring up to 100 tiny chips of rock to create just one square inch of an image. Prehistoric people later learned to create paints by grinding minerals (e.g., red from iron, white from gypsum, and black from charcoal) and plant material (e.g., red-to-yellow colors from ochre). Sometimes chipping and painting were combined.

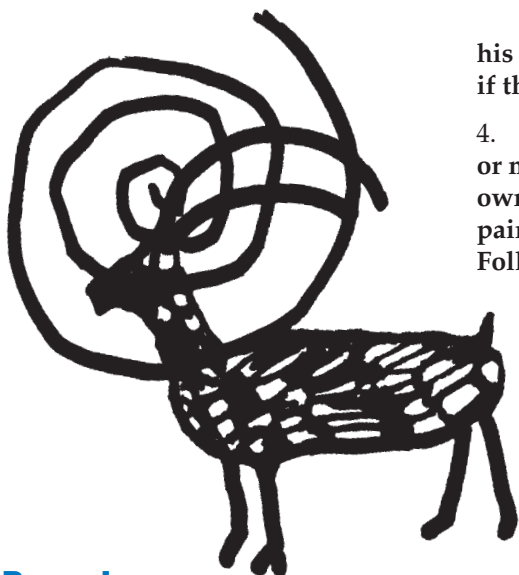
Archaeologists are scientists who investigate past cultures, locating and analyzing materials such as pictographs to help understand history. Archaeologists are able to learn how pictographs were made, but are rarely able to determine why they were made. This is because the people who created such images lived long ago, and their lives and perspectives differed greatly from ours. Nonetheless, through complex processes similar to detective work, archaeologists look for themes and try to decipher these messages. However, if three different scientists study the same pictograph, they likely will have three different interpretations.

In general, archaeologists believe that images created by early peoples represent information about harvests, location of herds of animals, social hierarchies, etc. Archaeologists have concluded that several pictograph images represent water. This finding suggests that early people valued water. The reproductions of pictographs on the previous page might relate to water.

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Project WET Curriculum and Activity Guide

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Procedure

▼ Warm Up

Have students list ways they leave messages for other people. Why do people leave messages? Have students describe how messages have been conveyed through time (e.g., telegrams, smoke signals, stone tablets). Display pictures in the classroom of ancient pictographs or petroglyphs or use representations provided on this page and on the previous two pages. Ask students to write what they think the original creator of the image intended. Discuss the meaning with the class.

▼ The Activity

1. Discuss the characteristics of a pictograph, and clarify that a petroglyph is a type of pictograph.
2. On drawing paper, have students design symbols that they think represent water. Encourage them to consider clouds, steam, water drops, rain, snow, thunderstorms, oceans, etc. Some of these symbols may be concrete, such as a water drop or a wave crashing on the beach. Others may be more abstract, such as wavy lines suggesting the surface of a lake.
3. Have each student come to the front of the room and draw one of

his or her symbols on the board. See if the class can guess its meaning.

4. Instruct students to choose one or more symbols and create their own pictograph or a petroglyph. Following are instructions for each:

- **Painted pictograph:**

Students can use paints to transfer their sketched image to a flat surface. Students might want to experiment making their own paints out of plant materials and minerals.

- **Petroglyph:** Symbols can be carved or chipped into soap, plaster of Paris, or some other flat surface using a nail. If a hard material is used, students should wear goggles and heavy, protective gloves.

▼ Wrap Up

Ask students to identify the characteristics of pictographs. What messages about water are people recording today that could be found in the future? What messages are we leaving for people in the future about our attitudes toward water? Examples might include fountains, dams, water slides, interpretive signs located near water-related nature scenes, hot tubs, billboards containing water scenes, etc.

Have students create a display for their pictographs. Students can interpret each other's messages and write small descriptions for each display. How are the interpretations alike? How are they different? Students can discuss reasons for the variations.

Assessment

Have students:

- design water symbols and simulate pictographs and petroglyphs (steps 2-4).

- describe how pictographs are used by cultures (*Wrap Up*).
- interpret possible messages presented in other students' pictographs (*Wrap Up*).

Upon completing the activity, for further assessment have students:

- sequence several pictographs in order to communicate a message.

Extensions

Encourage students to investigate other materials archaeologists use to decipher the past (e.g., tools, stored seeds, pottery). How many of these relate to water?

Another technique to create a pictograph or other artifact involves using modeling dough. (See the activity "A-maze-ing Water" for recipe.) Roll out dough until it is about 1 inch (2.5 cm) thick and 6 inches (15 cm) in diameter. Students can press figures into the dough or shape the dough to create three-dimensional images. Allow to dry, and paint if desired. These also make wonderful gifts.

Resources

Barnes, F. A. 1992. *Prehistoric Rock Art*. Salt Lake City, Utah: Wasatch Publishers.

Schaafsma, Polly. 1990. *Indian Rock Art of the Southwest*. Santa Fe, N. Mex.: School of American Research Press.

Smith, Shelley J., et al. 1993. *Intrigue of the Past: A Teacher's Activity Guide for Fourth through Seventh Grades*. Washington, D.C.: United States Department of Interior, Bureau of Land Management.

🍏 Stokes, William M. 1980. *Messages on Stone*. Salt Lake City, Utah: Starstone Publishing Co.